B.D.U.C.

BETA DISK USERS CLUB

BETA DISK NEWSLETTER   NO. 1

Welcome to this the first issue of the BDUC newsletter.
This newsletter is intended to provide hints, examples and
advice to users of the Technology Research Beta 128 and Beta
Plus disk interfaces. The club is non-commercial and non-profit
making and run on a voluntary basis. Your subscription covers
the cost of postage, stationery and photo-copying etc.

Since this is the first issue, I had better introduce myself.
I am Martyn Smith, a computer engineer. I have owned a 48K
Spectrum since 1982. I started BDUC recently when I recognised
there was a need for users to exchange information and thought
a users club might fill the gap or "close the loop". I set out
initially with the informal association of users that had
already been established by Sam Estall. This group used the
pages of Prestel as means of communicating, I did'nt want to
restrict membership to Prestel, so I set out to contact as many
known users as possible. I used Prestel contacts and Technology
Research's user lists to form the club. I might add that this is
the "official" Beta Disk Users Club and I must acknowledge the
help of Technology Research who have given BDUC support.

I hope in the next issues to include more readers contributions
so I need your input. This may take the form of written articles
of general interest, specific programming hints or anything
connected with Beta Disk use.

You should send your contribution to the address given in this
issue. You may send a tape, microdrive, floppy disk (5.25" or 3.
5") using Tasword 2 or Tasword 3 text file format. (Tasword Word
processors will be used extensively in the preparation of this
newsletter). BDUC will return all tapes, cartridges and disks.
You may also write, but make sure the letter is either typed or
dot matrix printed.

If you have an interesting application of a Beta Disk such as
club accounts, stock control or bulletin board, the club would
like to hear from you. Also if you know any other users you
think would like to join, tell them about BDUC.

BY M.J.SMITH, BDUC.

This program gives "extended" information about the disk and
allows manipulation of data available in the LIST output.
Unfortunately due to a bug the Beta cannot LIST into a data
file which has been opened for writing on the same disk.
The following example highlights the problem.

```
10 RANDOMIZE US R DOS: REM : OPEN #9,"CAT",W
15 RANDOMIZE US R DOS: REM : LIST #9
20 RANDOMIZE US R DOS: REM : CLOSE #9
```

All apparently looks well but if an attempt is made to read the
file and print on the screen thus,

```
10 RANDOMIZE US R DOS: REM : OPEN #9,"CAT",R
15 RANDOMIZE US R DOS: REM : MOVE #9 TO #2
20 RANDOMIZE US R DOS: REM : CLOSE #9
```

The file appears to contain random data. So the microdrive is
used to buffer the data.
The first listing creates the data file from the disk LIST and
gives the following information: data file type, sectors
used, basic length, code length, auto start line, date of LIST,
sectors used, sectors free, k-bytes used, k-bytes free, and number
of files. You should input the date into line 20, the mdrive
number in line 30, disk title in line 40 and alter the variable
DOS if your TRDOS calls 15363.

```
10 LET DOS=15619: REM CALL TRDOS
20 LET Y$="28:01:87": REM TODAY'S DATE
30 LET D=1: REM MDRIVE SELECT
40 LET D$="1": REM DISK TITLE
50 PRINT AT 0,0;"PUT A SPARE CART IN DRIVE ";D;AT 2,0;"PRESS A
   KEY": PAUSE 0
60 ERASE "M";D;D$
70 OPEN "M";D;D$
80 PRINT AT 6,0;"INSERT DISK:";D$;" IN DRIVE A";AT 8,0;"PRESS
   A KEY": PAUSE 0
90 RANDOMIZE USR DOS: REM : LIST #6
100 REM CALL TO TRDOS LIST DISK CONTENTS INTO MDRIVE STREAM
110 PRINT #6;" "
120 PRINT #6;" "
130 PRINT #6;" "
140 PRINT #6;Y$ : REM DATE LABEL
150 PRINT #6;"0": REM END OF FILE MARKER
160 PRINT AT 10,0;"DISK:";D$;" OK"
170 CLOSE #6
```

Once you have created the data file in mdrive 1 you may test all
is well by entering the following:
    10 MOVE "M";1;"1" TO #2
The disk name in this example is "1" as in the listing above.
This line displays the data file in a similar way to the normal
LIST but note the date stamp and the end of file marker "0".
The second listing calculates the information from the data file
and outputs to the screen, also creating a file "*LIST" on drive
A, this file now contains the extended information. Remember to
set DOS to suit.

```
  10 CLEAR #
  11 LET DOS=15619:RANDOMIZE USR DOS: REM : OPEN#7,"*LIST",W
  20 LET S=2544: REM SECTORS SET FOR YOUR CONFIG
     80T DS 2544,40T DS 1264,40T SS 624
  30 DIM Z$(62): DIM D$(62)
  40 LET X$="1": REM DISK TITLE
  50 LET D=1: REM MDRIVE SELECT
  60 OPEN #9;"M";D;X$
  70 INPUT #9;D$
  80 INPUT #9;D$
  90 INPUT #9;Z$
 100 IF Z$(3)=":" AND Z$(6)=":" THEN LET P$=Z$(1 TO )
 110 IF Z$(1 TO 8)="0        " THEN GO TO 210
 120 IF Z$(3 TO 7)="File " THEN GO TO 140
 130 GO TO 90
 140 INPUT #9;Z$
 150 IF Z$(3)=":" AND Z$(6)=":" THEN LET P$=Z$(1 TO )
 160 IF Z$(1 TO 8)="0        " THEN GO TO 210
 170 IF Z$(1 TO 12)="            " THEN GO TO 90
 180 IF Z$(10)="B" THEN LET Z$(18 TO 22)="0"
 190 PRINT Z$(10);":";Z$(1 TO 8);":";Z$(12 TO 14);":";Z$(18 TO 2
     2);":";Z$(24 TO 28);(Z$(29 TO 32) AND Z$(10)="B")
 191 PRINT #7;Z$(10);":";Z$(1 TO 8);":";Z$(12 TO 14);":"Z$(18 TO
     22);":";Z$(24 TO 28);(Z$(29 TO 32) AND Z$(10)="B")
 200 GO TO 140
 210 LET L=LEN D$: LET N=VAL (D$(1 TO 2)): LET FS=VAL (D$(L-4 TO
     L)): LET US=S-FS: LET FK=FS/4: LET UK=(S/4)-FK
 220 PRINT ''"DATE:";P$(1 TO 9);TAB 16;N;" FILE"+("S" AND N>1)
 221 PRINT #7;''"DATE:";P$(1 TO 9);TAB 16;"N;" FILE"+("S" AND N>
     1)
 230 PRINT "USED:";INT US;TAB 10;INT UK;"K"
 231 PRINT #7;"USED:";INT US;TAB 20;INT UK;"K"
 240 PRINT "FREE:";INT FS;TAB 10;INT FK;"K"
 241 PRINT #7;"FREE:";INT FS;TAB 20;INT FK;"K"
 250 CLOSE #9
 260 CLOSE #7
```

The third part transfers the extended LIST back to disk.

```
10 RANDOMIZE USR DOS: OPEN #8,"LIST",W
20 MOVE "M";1;"*LIST" TO #8
25 RANDOMIZE USR DOS: CLOSE #8
```

Once this is transferred back to disk the extended information is now available for display or can be used in the auto load program. The auto load program selects the BASIC files from the extended catalogue filename *LIST. It prints the files on the screen which may then be selected by number and loaded. The extended information file *LIST must however be kept up to date since titles actually on the disk may not be loaded if they are not in the *LIST file.

This is an easy way to load BASIC files since only one keypress is required. Further modification to the listing is required if CODE files are also to be loaded in the same way.

```
 10 CLEAR #
 20 DIM Z$(60)
 30 DIM T$(50,10): LET T=1
 40 LET E=USR DOS: REM: OPEN #9,"*LIST",R
 50 INPUT #9;Z$
 60 IF Z$(1)="0" THEN GO TO 140
 70 IF Z$(3 TO 7)="File " THEN GO TO 90
 80 GO TO 50
 90 INPUT #9;Z$
100 IF Z$(1)="0" THEN GO TO 140
110 IF Z$(1 TO 12)="            " THEN GO TO 50
120 IF Z$(10)="B" THEN LET T$(T)=Z$(1 TO 8): LET T=T+1
130 GO TO 90
140 LET E=USR DOS: REM: CLOSE #9
150 CLS
160 FOR X=1 TO T-1 STEP 2
170 PRINT X;TAB 4;T$(X);TAB 16;X+1;TAB 20;T$(X+1)
180 NEXT X
190 INPUT "SELECT TO LOAD ";X
200 LET E=USR DOS: REM: LOAD T$(X)
```

Suggestions for improvements or enhancements to any programs published in the newsletter are most welcome. Please send them for evaluation. I will publish any improvements in future issues.

BY M.J.SMITH, BDUC.

This program is for Beta Disk users who also use Beta Basic by Betasoft. Beta Basic is an extension to Sinclair Basic with many additional commands and functions.
The first part transfers Beta Basic to disk and the second part defines a procedure which eliminates the call to TRDOS by calling RANDOMIZE USR 15616, instead the word DOS is typed. This saves time and is most convenient.

To transfer Beta Basic to disk. Load the normal tape version of Beta Basic or your own customised version. Whilst Beta Basic is running type in the following:
In direct mode POKE 58457,195:POKE 58458,100:POKE 58459,228 this disables the normal Beta Basic initialisation.

```
1 LET RT=DPEEK(23730)
2 RANDOMIZE USR 59904
3 RANDOMIZE USR 15619: REM: SAVE "boot" LINE 6
4 RANDOMIZE USR 15619: REM: SAVE "BB"CODE RT+1,65367-RT
5 STOP
6 CLEAR RT: BORDER 0: PAPER 0: INK 7: CLS
7 RANDOMIZE USR 15619: REM: LOAD "BB"CODE
8 RANDOMIZE USR 58419: PAUSE 0: CLS: DELETE 1 TO 8
```

This saves Beta Basic to disk, the second part defines PROC DOS.

```
1 DEF PROC DOS
2 RANDOMIZ .E USR 63243
3 LET E=USR 15616
4 END PROC
```

In PROC DOS the RANDOMIZE USR 63243 statement disables Beta Basic's IM2. This means that Beta Basic lives more happily with TRDOS and there is no need to switch Beta Basic off before using any TRDOS commands. However with IM2 disabled the interrupt driven clock does not update. You can restore IM2 with RANDOMIZE USR 61369. The PROC DOS can be hidden in line 0 with the following PROC, which may be merged with the program above.

```
101 DEF PROC HIDE
102 LET X=DPEEK(23635)
103 DO
104 LET X=X+DPEEK(X+2)+4
105 EXIT IF PEEK (X+1)=100
106 POKE X+1,0
107 LOOP
108 END PROC
```

Here's an article of interest to all disk users, it's from Keith Burton (Spector) who runs the PHANTOM BB.

DISKS—ARE THEY ALL THE SAME?

About five years ago you'd be lucky to buy a pack of ten floppy disks for less than £30 (the 'new' 80 track disks would be even more!!) Considering inflation over the last five years, it's heartening to see that we are not now paying around £50 for a pack of ten. Disks are now as little as £10 for a box of 10.
Of course there are pitfalls in going for the cheaper disks and this article should help you select the right disk for the right job. First of all, what do all those abbreviations mean?

DD = Double Density	SD = Single Density
DS = Double Sided	SS = Single Sided
TPI = Tracks Per Inch	

Translating this into something understandable is fairly straightforward. All disks are manufactured in batches with each batch undergoing certification testing. A batch of disks passing all the tests becomes DD/DS 96TPI - Some companies even go as far as claiming Quad Density certification (QD/DS !!!')
Batches of disks only passing the minimum test levels will be certified SD/SS 48TPI. There are various intermediate levels too, but all discs from a certain manufacturer usually come off the same production line, regardless of their certification rating. When choosing disks you should be able to match the specifications of your DOS and disk drives to those of the required disks. 96 and 48TPI ratings equate roughly to 80 and 40 track disk drives however TPI has no relation to density as thats to do with the way the data is packed on the disk. Double density DOS's make greater demands on the performance of the disk. Obviously DD DOS's should be used with DD disks. Single density 96TPI disks may not be adequate for the demands of a DD DOS. However more often than not you will be able to format 40 track SD disks on 80 track drives in DD - successfully!!
Beware - cheap disks are usually just that CHEAP! However there are plenty of sources of perfectly good cheap disks if you shop around. If you are buying a new brand of budget disks for the first time, ensure that you can get a refund or an exchange if they prove to be unreliable. Its a good idea to format a few or even all the box of disks as disk formatting and verifying is a good test of the disk. Other things to look out for when shopping for new disks are hub reinforcement rings, strong or stiff disk jackets, which have been neatly glued on the underside and a good set of labels and stickers. Finally some dealers are selling disks in handy plastic boxes - they will help protect your disks and are well worth looking out for.

DISK CARE- A QUICK QUIDE.

We have all at some time come across a disk that won't read a
sector or file, the usual cause is the disk itself. It's a
flexible device with a lot of data stored in a small area and so
that data is prone to failure.
You will have seen the warnings on disk sleeves and boxes,
temperature, dust, food and drink can all cause harm to your
disks. One of the most important things is to never bend your
disks (that is not why we call them floppy!!) A slight kink in
the surface of the disk will make it unreadable.
Disks shouldn't be left near sources of strong magnetic fields
like speakers or monitors. Some users of larger micros have
experienced problems due to the drive being directly below the
monitor and the manufacturer has not provided adequate
protection for the disk in the form of screening of magnetic
feilds.
Don't smoke near disks - the particles that fly off a cigarette
are potentially devastating to the disk surface. Another problem
that can occur is the misalignment of the drive heads
themselves. The heads inside the drive which read or write data
to the disk are mounted on a moving platform, which is moved
across the disk surface by a stepper motor. If the heads become
misaligned the disk will become unreliable, disks become
suddenly unreadable. This misalignment may occur if the drive is
dropped or recieved a knock, wear and tear can also cause it.
If misalignment is your problem take it to a repair shop. DIY
alignment can do more harm than good!

Well that's all for this issue!

I hope you have found something of interest in this issue.
The next issue should be ready towards the end of May.
Please don't forget to send your contributions!

You may contact BDUC by phone during evenings and weekends on
0706 218354 or Prestel 204885283.